WHAT IS CLAIMED IS:

1. An apparatus comprising:

an optical filter having a predefined passband, said filter being responsive to optical radiation which impinges on said filter while traveling along a first optical path for causing a portion of the radiation from said first optical path which is within said passband to pass through said filter and for reflecting a remaining portion of the radiation from said first optical path so that it travels along a second optical path, and said filter being responsive to optical radiation which impinges on said filter while traveling along a third optical path for causing a portion of the radiation from said third optical path which is within said passband to pass through said filter and for reflecting a remaining portion of the radiation from said third optical path so that it travels along a fourth optical path, said first, second, third and fourth optical paths being different from each other; and

a redirecting section for causing optical radiation traveling away from said filter along said second optical path to be redirected to travel toward said filter along said third optical path.

2. An apparatus according to Claim 1,

wherein said filter has a substantially planar surface portion on one side thereof, said filter effecting said reflections of portions of radiation substantially at said surface portion; and

wherein said first, second, third and fourth optical paths are each contained at angularly spaced locations within a side surface of an imaginary right circular cone having an axis perpendicular to said surface portion and having an apex substantially at said surface portion.

3. An apparatus according to Claim 2, wherein said first, second, third and fourth optical paths are uniformly angularly spaced around said axis of said cone.

4. An apparatus according to Claim 1, wherein said redirecting section includes a first reflective surface which reflects radiation traveling along said second optical path so that it travels along a fifth optical path different from said first, second, third and fourth optical paths, and includes a second reflective surface which reflects radiation traveling along said fifth optical path so that it travels along said third optical path.

5. An apparatus according to Claim 4, wherein said redirecting section includes a prism having first, second and third surfaces thereon, said first and second surfaces respectively serving as said first and second reflective surfaces, and said second and third optical paths each passing through said third surface at spaced locations thereon.

6. An apparatus according to Claim 5, wherein said first, second and third surfaces are each substantially perpendicular to a plane which includes said second and third optical paths.

7. An apparatus according to Claim 1, wherein said redirecting section includes an optical fiber, and includes a lens section which causes optical radiation traveling along said second optical path to be directed into one end of said optical fiber, and which causes optical radiation exiting from an opposite end of said optical fiber to be directed along said third optical path.

8. An apparatus according to Claim 7, wherein said lens section includes first and second optical lenses, said optical fiber having each end optically coupled to a respective one of said lenses.

9. An apparatus according to Claim 7, wherein said lens section includes an optical lens, said optical fiber having each end optically coupled to said lens at respective different locations thereon.

10. An apparatus according to Claim 1, wherein said filter is responsive to optical radiation within said passband which impinges on said filter while traveling along a fifth optical path for causing said radiation from said fifth optical path to pass through said filter and thereafter travel away from said filter along said fourth optical path.

11. An apparatus according to Claim 10, wherein said filter causes the portion of the radiation from said first optical path which passes through said filter to thereafter travel away from said filter along a sixth optical path different from said fifth optical path.

12. An apparatus according to Claim 11,

wherein said filter has a substantially planar surface portion on one side thereof, said filter effecting said reflections of portions of radiation substantially at said surface portion;

wherein said first, second, third and fourth optical paths are each contained at angularly spaced locations within a side surface of an imaginary right circular first cone having an axis perpendicular to said surface portion and having an apex approximately at said surface portion; and

wherein said fifth and sixth optical paths are each contained at angularly spaced locations within a side surface of an imaginary right circular second cone having an axis perpendicular to said surface portion and having an apex approximately at said surface portion, said first and second cones being disposed on opposite sides of said filter.

13. An apparatus according to Claim 12, wherein said first and sixth optical paths are approximately parallel and coaxial; and wherein said fourth and fifth optical paths are approximately parallel and co-linear.

14. An apparatus according to Claim 11, including a primary input port which directs incoming optical radiation along said first optical path, an add input port which directs incoming optical radiation along said fifth optical path, a primary output port which receives radiation traveling along said fourth optical path, and a drop output port which receives radiation traveling along said sixth optical path.

15. An apparatus according to Claim 14, wherein said input and output ports each include an optical lens which processes optical radiation traveling through that port.

16. An apparatus according to Claim 1, wherein said filter includes a thin film filter element.

17. A method, comprising the steps of:

causing optical radiation traveling along a first optical path to impinge on an optical filter having a predefined passband in a manner so that a portion of the radiation from said first optical path which is within said passband passes through said filter and a remaining portion of the radiation from said first optical path is reflected and travels along a second optical path;

causing optical radiation traveling along a third optical path to impinge on said filter in a manner so that a portion of the radiation from said third optical path which is within said passband passes through said filter and a remaining portion of the radiation from said third optical path is reflected and travels along a fourth optical path, said first, second, third and fourth optical paths being different from each other; and

redirecting optical radiation traveling away from said filter along said second optical path in a manner so that it travels toward said filter along said third optical path.

18. A method according to Claim 17,

including the step of providing first and second reflective surfaces; and

wherein said redirecting step includes the steps of using said first reflective surface to reflect radiation traveling along said second optical path so that it travels along a fifth optical path different from said first, second, third and fourth optical paths, and using said second reflective surface to reflect radiation traveling along said fifth optical path so that it travels along said third optical path.

19. A method according to Claim 18, including the steps of:

providing a prism which has said first and second reflective surfaces thereon; and

orienting said prism so that said second and third optical paths each pass through a further surface of said prism at spaced locations thereon.

20. A method according to Claim 19, wherein said orienting step is carried out in a manner so that said first and second reflective surfaces and said further surface are each substantially perpendicular to a plane which includes said second and third optical paths.

21. A method according to Claim 17,

including the step of providing an optical fiber and a lens section; and

wherein said redirecting step includes the steps of causing optical radiation traveling along said second optical path to be directed into one end of said optical fiber, and causing optical radiation exiting from an opposite end of said optical fiber to be directed along said third optical path.

22. An apparatus according to Claim 21, including the steps of:

configuring said lens section to include first and second optical lenses; and

optically coupling each end of said optical fiber to a respective one of said lenses.

23. An apparatus according to Claim 21, including the steps of:

configuring said lens section to include an optical lens; and

optically coupling each end of said optical fiber to said lens at respective different locations thereon.

24. A method according to Claim 20, including the step of causing optical radiation within said passband which impinges on said filter while traveling along a fifth optical path to pass through said filter and thereafter travel away from said filter along said fourth optical path.

25. A method according to Claim 24, including the step of causing the portion of the radiation from said first optical path which passes through said filter to thereafter travel away from said filter along a sixth optical path different from said fifth optical path.